

IN THE CLAIMS

Please amend the claims as follows:

1. (Previously Presented) A tilt control device for controlling a radial tilt of a recording surface of an optical disc with respect to an optical recording/reproducing beam, said tilt control device comprising:

5           control means for generating two focus controlling outputs; and

          actuating means for receiving said two focus controlling outputs for controlling a focusing state and the radial tilt of the optical recording/reproducing beam utilizing said received two  
10       focus controlling outputs, wherein said control means determines a radial tilt value based on a differentiation of focus control values obtained at different radii of said optical disk.

2. (Previously Presented) The device as claimed in claim 1, wherein said actuating means comprises a split focus coil arrangement for providing focus and tilt adjustment, and said control means supplies said two focus controlling outputs to  
5       respective coils of said split focus coil arrangement.

3. (Previously Presented) The device as claimed in claim 1, wherein said focus controlling outputs are Proportional Integral Derivative (PID) controller outputs.

4. (Previously Presented) The device as claimed in claim 1,  
wherein said control means positions a sledge at at least two  
different radial positions, controls said actuating means to adjust  
the focus, and measures said focus control values at said at least  
5 two different radial positions.

5. (Previously Presented) The device as claimed in claim 1,  
wherein said control means calculates a mean disc tilt value in a  
tilt register.

6. (Previously Presented) The device as claimed in claim 1,  
wherein said control means generates said focus controlling outputs  
based on measured mean focus control values and corresponding  
radial steps between two measurements.

7. (Currently Amended) A tilt control device for controlling a  
radial tilt of a recording surface of an optical disc with respect  
to an optical recording/reproducing beam, said tilt control device  
comprising:

5 control means for generating two focus controlling  
outputs; and

actuating means for controlling a focusing state and the  
radial tilt of the optical recording/reproducing beam based on said  
two focus controlling outputs, ~~characterized in that~~ wherein said  
10 control means determines a radial tilt value based on a  
differentiation of focus control values obtained at different radii

of said optical disk, wherein said mean disc tilt value is obtained based on the following equation:

$$r_{\beta} = \frac{G_c c_f \Delta r_f}{c_f (a_1 + a_2) \Delta R}$$

- 15 where  $r_{\beta}$  is the difference between two averaged focus control values measured at initialization,  $\Delta R$  is a sledge step in radial direction between two measurements,  $G_c$  is the factor between actuator tilt and disc tilt for which comatic aberrations are optimal corrected,  $c_f$  is a spring constant acting against a  
20 focusing movement,  $c_t$  is a spring constant acting against a tilt movement,  $a_1$  is a distance of a first coil of said split coil arrangement with respect to a symmetry line, and  $a_2$  is a distance of a second coil of said split coil arrangement with respect to said symmetry line.

8. (Previously Presented) The device as claimed in claim 1, wherein said device further comprises a tilt table for storing an information indicating mean disc tilt values and corresponding radial positions.

9. (Previously Presented) An optical disc player comprising a tilt control device as claimed in claim 1.

10. (Previously Presented) A tilt control method for controlling a radial tilt of a recording surface of an optical disc with respect

to an optical recording/reproducing beam, said tilt control method comprising the steps acts of:

5           generating a focus controlling output and a tilt controlling output; and

          receiving said focus and tilt controlling outputs at an actuator to control a focusing state of the optical recording/reproducing beam and the radial tilt utilizing said

10   received focus and tilt controlling outputs; and

          determining a radial tilt value based on a differentiation of focus control values obtained at different radii of said optical disk.

11.   (Previously Presented) The method as claimed in claim 10, wherein said receiving said focus and tilt controlling outputs act comprises using a split coil arrangement arranged to provide a focus adjustment, said focus and tilt controlling outputs being  
5   supplied to respective coils of said split coil arrangement.

12.   (Previously Presented) The method as claimed in claim 10, wherein said receiving said focus and tilt controlling outputs act comprises using a mean focus controlling output for tilt control.

13.   (Cancelled).

14.   (Previously Presented) A tilt control device for controlling a radial tilt of a recording surface of an optical disc with respect

to an optical recording/reproducing beam, said tilt control device comprising:

5           a processor configured to generate two focus control outputs; and

          an actuator configured to:

          receive said two focus control outputs; and

          control a focusing state and the radial tilt of the optical

10   recording/reproducing beam utilizing said received two focus control outputs, wherein said processor determines a radial tilt value based on a differentiation of focus control values obtained at different radii of said optical disk.

15. (Previously Presented) The device as claimed in claim 14, wherein said actuator comprises a split focus coil arrangement for providing focus and tilt adjustment, and said processor supplies said two focus control outputs to respective coils of said split  
5   focus coil arrangement.

16. (Previously Presented) The device as claimed in claim 14, wherein said processor calculates a mean disc tilt value in a tilt register.

17. (Previously Presented) The device as claimed in claim 16, wherein said mean disc tilt value is obtained based on the following equation:

$$r_{\beta} = \frac{G_c c_f \Delta r_f}{c_f (a_1 + a_2) \Delta R}$$

5 where  $\bullet r_f$  is the difference between two averaged focus control values measured at initialization,  $\bullet R$  is a sledge step in radial direction between two measurements,  $G_c$  is the factor between actuator tilt and disc tilt for which comatic aberrations are optimal corrected,  $c_f$  is a spring constant acting against a  
 10 focusing movement,  $c_t$  is a spring constant acting against a tilt movement,  $a_1$  is a distance of a first coil of said split coil arrangement with respect to a symmetry line, and  $a_2$  is a distance of a second coil of said split coil arrangement with respect to said symmetry line.

18. (Previously Presented) The device as claimed in claim 14, wherein said device further comprises a tilt table for storing an information indicating mean disc tilt values and corresponding radial positions.

19. (Previously Presented) The device as claimed in claim 14, wherein said processor generates said focus control outputs based on measured mean focus control values and corresponding radial steps between two measurements.